

Name: \_\_\_\_\_

**at1110paper\_practice\_test (v110)**

1. Solve the equation.

$$(8x - 7)(3x - 4) = 0$$

$$x = \frac{7}{8} \quad x = \frac{4}{3}$$

2. Factor the expression.

$$x^2 - 4x - 12$$

$$(x + 2)(x - 6)$$

3. Expand the following expression into standard form.

$$(5x - 2)(5x + 2)$$

$$\begin{aligned} & 25x^2 + 10x - 10x - 4 \\ & 25x^2 - 4 \end{aligned}$$

4. Factor the expression.

$$9x^2 - 49$$

$$(3x + 7)(3x - 7)$$

5. Expand the following expression into standard form.

$$(7x + 3)^2$$

$$\begin{aligned}49x^2 + 21x + 21x + 9 \\49x^2 + 42x + 9\end{aligned}$$

6. Solve the equation with factoring by grouping.

$$15x^2 - 10x - 18x + 12 = 0$$

$$\begin{aligned}(5x - 6)(3x - 2) = 0 \\x = \frac{6}{5} \quad x = \frac{2}{3}\end{aligned}$$

7. Expand the following expression into standard form.

$$(4x + 5)(9x + 7)$$

$$\begin{aligned}36x^2 + 28x + 45x + 35 \\36x^2 + 73x + 35\end{aligned}$$

8. Solve the equation.

$$12x^2 + 69x + 25 = 5x^2 + 3x - 2$$

$$\begin{aligned}7x^2 + 66x + 27 = 0 \\(7x + 3)(x + 9) = 0 \\x = \frac{-3}{7} \quad x = -9\end{aligned}$$